



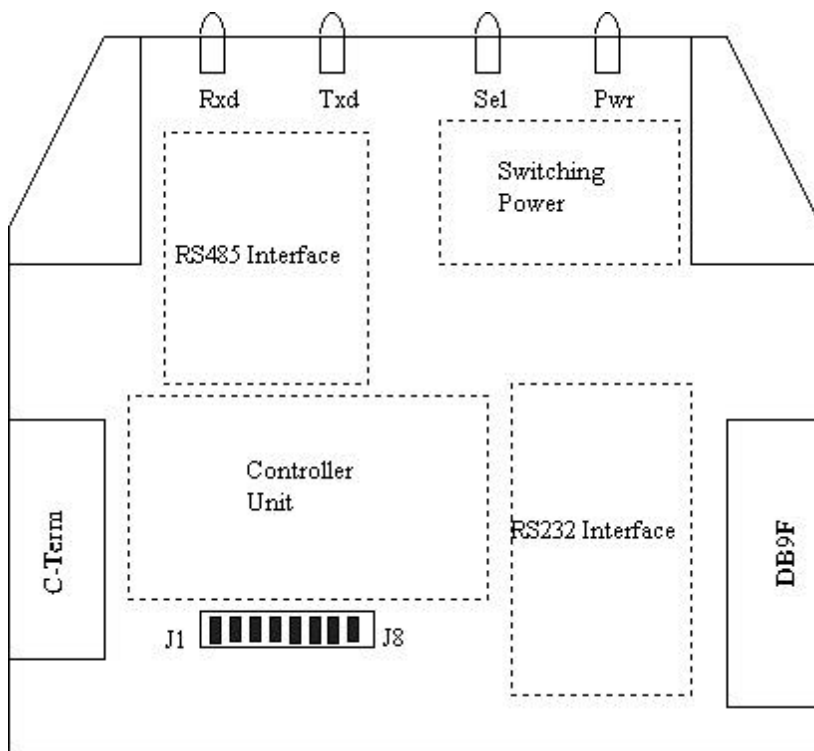
# ECD485AC User Manual

## Addressable RS232 to RS485 Converter

### 1. Introduction

The ECD485AC (Addressable RS485 Converter), allows non-addressable, “dumb” RS232 devices to be connected on an addressable RS485/422 network. By using a “header character,” in conjunction with a user selectable “unit hex address” for each ECD485AC, as many as 32 RS232 devices can be granted access to the network.

### 2. Jumpers Setting



Jumper	Position	Description
J1	1*	Data Rate: 9600bps
	0	Data Rate: 19200bps
J2, J3	00	Disable auto-turn off timer
	01	Auto-turn off 100ms
	10	Auto-turn off 150ms
	11*	Auto-turn off 200ms
J4 to J8		Address setting



Note: 1 stand for jumper shunt is in, and 0 for out.

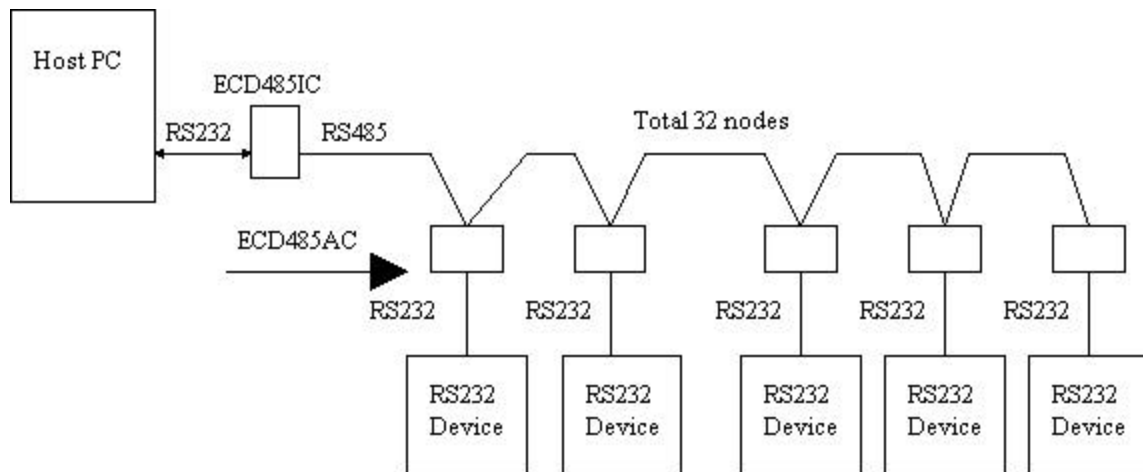
Jumper J4 to J8 Setting Table

Address number	J4	J5	J6	J7	J8
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
3	0	0	0	1	1
30	1	1	1	1	0
31*	1	1	1	1	1

Note: 1 stand for jumper shunt is in, and 0 for out.

\* For factory default setting.

### 3. Application



### 4. Communication

#### 4.1. Data Communication Speed

Set the data communication speed using J1, put the shunt in for 9600bps, out for 19200bps (Please contact us if you want to use different communication speed)

#### 4.2. Header Character

By default, the header character is set to “SOH” (Hex 0x01).

Note: a header character should be selected that will NOT interfere the RS232 device, because by default, the ECD485AC unit will transmit the “header character” to the RS232 device before it is disabled.



### 4.3. Data Frame

The data communication frame should be like this:

**“Header Character” + Address number + Data which send to RS232 device**

Header Character: ASCII “SOH”, Hex “01” (contact us if you want to change)

Address number: 0 to 31

### 4.4. Auto-turn off timer

Auto-turn off timer is using for auto-turn off the communication path, by default, set to disable, so the unit will pass all the data in the RS485 bus to the specified RS232 device include the next header character and the address number before it is disabled. You can set the auto-turn off timer to auto cutoff the comm. When it reach the timing. This can mask the header character and address number sent to RS232 device.

Please contact us if you want to set the different timing range.

## 5. Technical Specification

### 5.1. RS-485 port Description

- 5.1.1. **Comm Mode:** 2-wire Signals; D+(B/B’), D-(A/A’), and Gnd.
- 5.1.2. **Duplex;** half duplex. direction automatic.
- 5.1.3. **Line Voltage;** -7v to +12v permits ?7vdc ground difference between devices.
- 5.1.4. **Bias;** 470? pull-up (D+A, D+B) 470? pull-down (D-A,D-B) jumper selectable.
- 5.1.5. **Bus Termination;** 120? .
- 5.1.6. **Official maximum Bus Length;** 1000m per EIA-485, 500m per ISO 8482
- 5.1.7. **Practical maximum Bus Length;** 3000m with high-quality cable and other conditions.

### 5.2. Power Supply

- 5.2.1. **5v Model;** Supply of 4.75v to 5.25v (500mA average)
- 5.2.2. **9-36v Model;** 2.5watt (at 24vdc about 100mA)

### 5.3. Environmental

- 5.3.1. **Ambient operating temperature;** 0C to +60C
- 5.3.2. **Ambient storage temperature;** -40C to +100C
- 5.3.3. **Relative Humidity;** 10 to 95% RH, non condensing
- 5.3.4. **Casing; fungus and termite resistance;** Good.
- 5.3.5. Casing; flame characteristics: self-extinguishing.



## 5.4. Mechanical Dimensions

5.4.1. Height; Width; Depth (See drawing).

5.4.2. Weight; 130g.

5.4.3. Terminal Capacity;  
2.5mm strand (12 AWG)  
4.0mm solid (12 AWG).

5.4.4. Mounting Rail;  
DIN EN 50022 (35mm "symmetrical")  
DIN EN 50025 (32mm "asymmetrical")

**Note: it fits best on the DIN 50022 style rail.**

